

What is claimed is:

1. A multi-layer sliding part comprising a metal backing plate and a bearing metal layer bonded to the backing plate, wherein the bearing metal layer is formed by a method including sintering a mixture of 1 - 50 parts by volume of a Cu-plated solid lubricant powder with 100 parts by volume of a Cu-based alloy powder comprising 5 - 20 mass % of Sn and a remainder of Cu, and wherein the Cu-plated solid lubricant powder and the Cu-based alloy powder are metallurgically bonded to each other in the sintered bearing metal layer and secured to the metal backing plate by sintering.

2. A multi-layer sliding part as claimed in claim 1 wherein the metal backing plate comprises a steel plate.

3. A multi-layer sliding part as claimed in claim 1 wherein the solid lubricant of the Cu-plated solid lubricant powder is selected from graphite, molybdenum disulfide, tungsten disulfide, and mixtures of these.

4. A multi-layer sliding part prepared by a method comprising mixing 1 - 50 parts by volume of a Cu-plated solid lubricant powder with 100 parts by volume of a Cu-based alloy powder comprising 5 - 20 mass % of Sn and a remainder of Cu to form a mixed powder, sintering the mixed powder in a reducing atmosphere to form a sintered mass, pulverizing the sintered mass

to form a powder, dispersing the powder formed by pulverizing on a metal backing plate, and sintering the dispersed powder to bond grains of the dispersed powder to each other and to the backing plate.

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5. A multi-layer sliding part as claimed in claim 4 wherein the metal backing plate comprises a steel plate.

6. A multi-layer sliding part as claimed in claim 4 wherein the solid lubricant of the Cu-plated solid lubricant powder is selected from graphite, molybdenum disulfide, tungsten disulfide, and mixtures of these.

7. A method of manufacturing a multi-layer sliding part comprising:

(a) mixing 1 - 50 parts by volume of a Cu-plated solid lubricant powder with 100 parts by volume of a Cu-based alloy powder comprising 5 - 20 mass % of Sn and a remainder of Cu to form a mixed powder,

(b) sintering the mixed powder in a reducing atmosphere to form a sintered mass,

(c) pulverizing the sintered mass to form a powder with a particle size of at most 300 μm ,

(d) dispersing the powder formed by pulverizing on a steel plate,

(e) sintering the dispersed powder in a reducing atmosphere to bond grains of the dispersed powder to each other and to the

steel plate to form a bearing metal layer on the steel plate,
thereby forming a multi-layer material,

(f) pressing the multi-layer material to densify the
bearing metal layer,

5 (g) annealing the multi-layer material after pressing in a
reducing atmosphere, and

(h) pressing the annealed multi-layer material to increase
the strength of the multi-layer material.

10 8. A method as claimed in claim 7 wherein the solid
lubricant of the Cu-plated solid lubricant powder is selected
from graphite, molybdenum disulfide, tungsten disulfide, and
mixtures of these.

15 9. A method as claimed in claim 7 wherein the sintering in
step (b) is carried out at a temperature of 750 - 850°C.

10. A method as claimed in claim 7 wherein the sintering in
step (e) is carried out at a temperature of 800 - 880°C.

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11. A method as claimed in claim 7 wherein the annealing in
step (f) is carried out at a temperature of 840 - 880°C.